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PTO/SB/21 (04-07)

Approved for use through 09/30/2007. OMB 0651-0031  
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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<b>TRANSMITTAL FORM</b>  (to be used for all correspondence after initial filing)	Application Number	10/708,620	
	Filing Date	03/16/2004	
	First Named Inventor	Hung-De Chen	
	Art Unit	2825	
	Examiner Name	MALSAWMA, LALRINFAMKIM HMAR	
Total Number of Pages in This Submission	6	Attorney Docket Number	QDIP0005USA

ENCLOSURES (Check all that apply)		
<input checked="" type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> After Allowance Communication to TC
<input type="checkbox"/> Fee Attached	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
<input type="checkbox"/> Amendment/Reply	<input type="checkbox"/> Petition	<input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> After Final	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Proprietary Information
<input type="checkbox"/> Affidavits/declaration(s)	<input type="checkbox"/> Power of Attorney, Revocation	<input type="checkbox"/> Status Letter
<input type="checkbox"/> Extension of Time Request	<input type="checkbox"/> Change of Correspondence Address	<input checked="" type="checkbox"/> Other Enclosure(s) (please identify below):
<input type="checkbox"/> Express Abandonment Request	<input type="checkbox"/> Terminal Disclaimer	1. PTO/SB/44
<input type="checkbox"/> Information Disclosure Statement	<input type="checkbox"/> Request for Refund	2. A copy of the front page of patent
<input type="checkbox"/> Certified Copy of Priority Document(s)	<input type="checkbox"/> CD, Number of CD(s) _____	
<input type="checkbox"/> Reply to Missing Parts/Incomplete Application	<input type="checkbox"/> Landscape Table on CD	
<input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53	Remarks	
	Request for Certificate of Correction under 37 CFR 1.323	
<b>SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT</b>		
Firm Name	North America Intellectual Property Corporation	
Signature	<i>Winston Hsu</i>	
Printed name	Winston Hsu	
Date	Reg. No.	41,526
JUL 20 2007		

Certificate  
JUL 25 2007  
of Correction

CERTIFICATE OF TRANSMISSION/MAILING		
I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:		
Signature	<i>Josefina Wang</i>	
Typed or printed name	Josefina Wang	Date
		JUL 20 2007

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Patent No.: 6,869,833 B1                      Issue Date : 03/22/2005  
Appl. No. : 10/708,620                      Filing Date : 03/16/2004  
Inventor : Hung-De Chen  
Examiner : MALSAWMA, LALRINFAMKIM HMAR    Art Unit : 2825  
Docket No.: QDIP0005USA

Title: METHOD OF MANUFACTURING A THIN FILM TRANSISTOR OF A  
LIQUID CRYSTAL DISPLAY

To:                      The Certificate of Correction Branch  
                            Commissioner for Patents  
                            P.O. BOX 1450  
                            Alexandria, VA 22313-1450

Subject:              Request for Certificate of Correction

Dear Sir,

The applicant recently found that the residence of the inventor listed on the front page of the above-identified Patent is incorrect (Attachment 1). The erroneous residence "Fu-Chien (CN)" was provided on the Application Data Sheet while filing the above-identified patent on 03/16/2004. Failure to provide the correct residence of the first inventor on the Application Data Sheet was inadvertent.

The applicant hereby requests that a Certificate of Correction be issued under 37 CFR 1.323 and submits the fee \$100.00 set forth in 37 CFR 1.20(a) herewith. Please correct the residence of the first inventor from "Fu-Chien (CN)" to "Kinmen County (TW)". Thank you.

07/24/2007 CNHUYEN2 00000027 503105 6869833  
01 FC:1811 100.00 DA

**JUL 31 2007**

Sincerely yours,

Winston Hsu

Date: JUL 20 2007

Winston Hsu, Patent Agent No. 41,526

P.O. BOX 506, Merrifield, VA 22116, U.S.A.

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Note: Please leave a message in my voice mail if you need to talk to me. (The time in D.C. is 12 hours behind the Taiwan time, i.e. 9 AM in D.C. = 9 PM in Taiwan.)

JUL 31 2007



PTO/SB/17 (07-07)  
Approved for use through 06/30/2010. OMB 0651-0032  
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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Effective on 12/08/2004.  
Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

## FEE TRANSMITTAL For FY 2007

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$) 100.00

### Complete if Known

Application Number	10/708,620
Filing Date	03/16/2004
First Named Inventor	Hung-De Chen
Examiner Name	MALSAWMA, LALRINFAMKIM HMAR
Art Unit	2825
Attorney Docket No.	QDIP0005USA

### METHOD OF PAYMENT (check all that apply)

☐ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): \_\_\_\_\_

☒ Deposit Account Deposit Account Number: 50-3105 Deposit Account Name: North America Intellectual Property Corporation

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☒ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, except for the filing fee

☒ Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17 ☒ Credit any overpayments

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### FEE CALCULATION

#### 1. BASIC FILING, SEARCH, AND EXAMINATION FEES

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

#### 2. EXCESS CLAIM FEES

Fee Description	Fee (\$)	Small Entity Fee (\$)
Each claim over 20 (including Reissues)	50	25
Each independent claim over 3 (including Reissues)	200	100
Multiple dependent claims	360	180

Total Claims - 20 or HP =          x          =         

HP = highest number of total claims paid for, if greater than 20.

Indep. Claims - 3 or HP =          x          =         

HP = highest number of independent claims paid for, if greater than 3.

#### 3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets - 100 =          / 50 =          (round up to a whole number) x          =         

#### 4. OTHER FEE(S)

Non-English Specification, \$130 fee (no small entity discount)

Other (e.g., late filing surcharge): Request for Certificate of Correction

Fees Paid (\$)

100

#### SUBMITTED BY

Signature	<u>Winston Hsu</u>	Registration No. (Attorney/Agent)	<u>41,526</u>	Telephone	<u>3027291562</u>
Name (Print/Type)	<u>Winston Hsu</u>	Date	<u>JUL 20 2007</u>		

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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**UNITED STATES PATENT AND TRADEMARK OFFICE  
CERTIFICATE OF CORRECTION**

Page 1 of 1

PATENT NO. : 6,869,833 B1  
APPLICATION NO.: 10/708620  
ISSUE DATE : Mar. 22, 2005  
INVENTOR(S) : Hung-De Chen

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

On the Title Page, Item (75), Inventors,

the residence should be corrected from "Fu-Chien (CN)" to --Kinmen County (TW) --

MAILING ADDRESS OF SENDER (Please do not use customer number below):

This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: **Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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**JUL 31 2005**

Please correct the residence of the inventor from  
"Fu-Chien (CN)" to "Kinmen County (TW)"



US006869833B1

(12) **United States Patent**  
**Chen**

(10) **Patent No.:** **US 6,869,833 B1**  
(45) **Date of Patent:** **Mar. 22, 2005**

(54) **METHOD OF MANUFACTURING A THIN  
FILM TRANSISTOR OF A LIQUID CRYSTAL  
DISPLAY**

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6,448,117 B1 \* 9/2002 Jen et al. .... 438/160  
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6,620,719 B1 \* 9/2003 Andry et al. .... 438/597  
2002/0019082 A1 \* 2/2002 Wong ..... 438/149

(75) Inventor: **Hung-De Chen**, **Fu-Chien (CN)**

\* cited by examiner

(73) Assignee: **Quanta Display Inc.**, **Tao-Yuan Hsien**  
(TW)

*Primary Examiner*—Matthew Smith  
*Assistant Examiner*—Lex H. Malsawma  
(74) *Attorney, Agent, or Firm*—Winston Hsu

(\*) Notice: Subject to any disclaimer, the term of this  
patent is extended or adjusted under 35  
U.S.C. 154(b) by 0 days.

(57) **ABSTRACT**

A method for fabricating a TFT having the steps of provid-  
ing a substrate; sequentially depositing a transparent con-  
ductive layer, a first metal layer, a first insulating layer, a  
semiconductor layer, and a second metal layer on the sub-  
strate; performing a first photo-etching-process (PEP) to  
remove portions of the deposited layers to form a source  
electrode and a drain electrode and define a channel region,  
the first PEP includes a first halftone photolithograph pro-  
cess; depositing a second insulating layer and performing a  
second PEP to form a plurality of contact holes; and deposi-  
ting a third metal layer and performing a third PEP to  
remove portions of the third metal layer.

(21) Appl. No.: **10/708,620**

(22) Filed: **Mar. 16, 2004**

(51) Int. Cl.<sup>7</sup> ..... **H01L 21/00**

(52) U.S. Cl. .... **438/158; 438/151; 438/30**

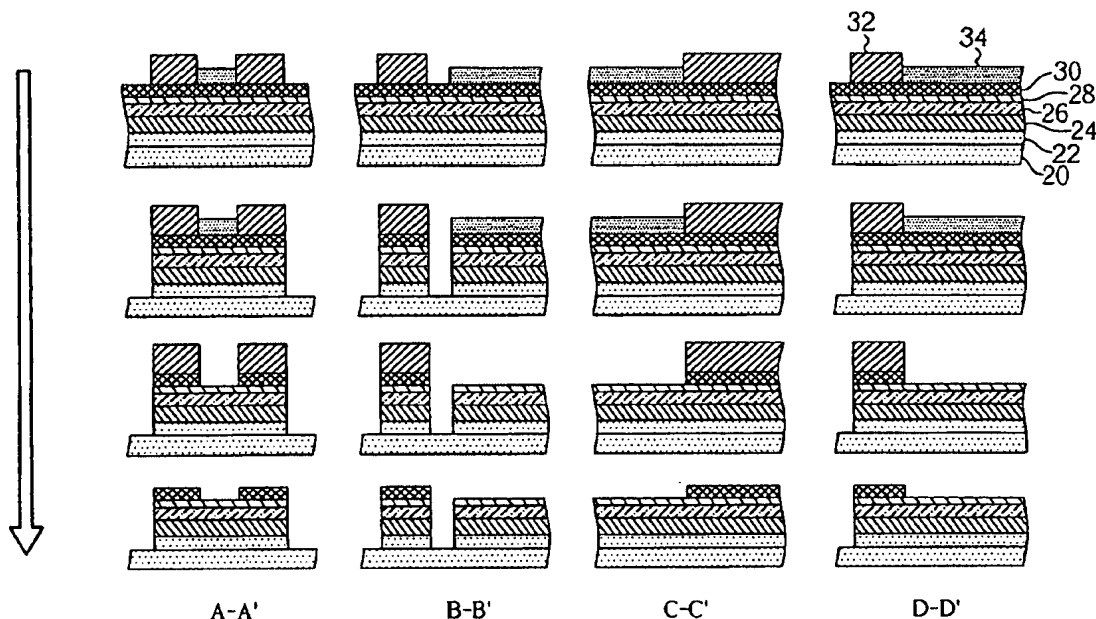
(58) Field of Search ..... **438/30, 151, 158,**  
**438/609**

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

5,340,758 A \* 8/1994 Wei et al. .... 438/158  
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**19 Claims, 9 Drawing Sheets**



**JUL 31 2007**